PCN107

MEASURING RISK FACTORS FOR NON-ADHERENCE USING PATIENT-REPORTED OUTCOMES IN STUDIES EVALUATING ADHERENCE WITH ORAL ANTINEOPLASTIC AGENTS: A 10-YEAR REVIEW

Makuia S1, Hanson KA2

1IRC London, Express Scripts Company, London, UK; 2JDBC: An Express Scripts Company, Dorval, QC, Canada

OBJECTIVES: With oral antineoplastic agents (OAsAs) becoming the mainstream of treatment for several cancer types, understanding risk factors for medication non-adherence is becoming increasingly important in oncology. Patient-reported outcome (PRO) instruments may provide valuable insight on barriers to medication adherence in the real world. This study sought to identify and describe key patient-reported risk factors for non-adherence measured in observational studies evaluating adherence with OAsAs.

METHODS: A targeted literature review was conducted to identify OAA adherence studies utilizing PROs and published between January 2009 and December 2018. Key data points included from each study were: study design, cancer type, and all PRO instruments or study-specific questions used. Domains measured by each PRO instrument and questionnaire were recorded to understand patient-reported risk factors measured.

RESULTS: Of 100 articles reviewed, 11 studies met all study inclusion/exclusion criteria. Nine studies (82%) used at least one validated PRO instrument and 7 studies (64%) used at least one study-specific questionnaire to measure patient-reported risk factors for non-adherence. The most commonly used PRO instruments were the Beliefs About Medicines Questionnaire (BMQ, n=6) and the Satisfaction with Information about Medicines Scale (SIMS, n=3). Six studies (55%) used a validated PRO to measure health-related quality of life (HRQoL); however, only the European Organization for Research and Treatment of Cancer Quality of Life Core-30 was used in more than one study. Overall, the most common domains measured by PRO instruments or questionnaires were knowledge about medication (n=7), beliefs about medication (n=6), attitudes toward disease (n=6), symptoms (n=3), and side effects (n=3).

CONCLUSIONS: Risk factors for non-adherence are commonly measured by patient-report in observational studies evaluating adherence with OAsAs. Further work is needed to clarify advantages and disadvantages of using specific PROs to measure relevant risk factors and determine if risk factors vary by cancer type.

PCN108

MEASUREMENT OF HEALTH STATE UTILITIES FOR RELAPSED OR REFRACTORY PERIPHERAL T-LYMPHOCYTIC LYMPHOMA USING BY TIME-TRADE-OFF AND VISUAL ANALOG SCALE METHODS

Kang JH1, Choi I1, Song H2, Park S2, Suh D3

1Chung-Ang University, Seoul, South Korea

OBJECTIVES: To elicit health utilities for relapsed or refractory peripheral T-lymphocytic lymphoma (PTL) using visual analog scaling (VAS) and time trade-off (TTO) methods, to examine the impact of age on VTO values, and to estimate power curves to convert VAS scores to TTO values.

METHODS: Health state vignettes for four health states (complete remission, partial response, stable disease and progressive disease) and four treatment-related adverse events (mucositis, thrombocytopenia, anemia, neutropenia) were developed. Utility elicitation from 125 Koreans from the general public living in Seoul was conducted using VAS and TTO methods. Linear mixed regression analysis was used to test the impact of age on VTO values. Nonlinear regression was used to estimate power curves to convert VAS scores to TTO values. RESULTS: Complete remission was the most preferred health state (mean TTO value: 0.860), followed by partial response, 0.784, stable disease, 0.746, and progressive disease, 0.567. Treatment related adverse events were related to negative impacts. The smallest disutility was associated with mucositis (mean TTO disutility: -0.0135), and side effects (mean TTO disutility: -0.107). Age was not a significant determinant of age on TTO values. Nonlinear regression was used to estimate power curves to convert VAS scores to TTO values.

CONCLUSIONS: The range of TTO values of CR was 0.059 to 0.087, that of PR was 0.599 to 0.611, and that of SD and PD was 0.47, 0.38, and 0.13 times lower than those of CR, respectively. The ratios in AEs(neutropenia, mucositis, thrombocytopenia, and anemia) were 0.45, 0.51, 0.46, and 0.51 times lower than those of CR, respectively.

PCN110

MAPPING UTILITY SCORES FROM EUROPEAN ORGANIZATION FOR TREATMENT OF CANCER CORE-30 QUESTIONNAIRE SCORES (EORTC QLQ-C30) IN RELAPSED MULTIPLE MYELOMA

Ashaye AQ1, Zhang J1, Bender RH2, Alincauća A3, Panjabi S4

1Evidera, Lexington, MA, USA; 2Evidera, Bethesda, MD, USA; 3Oxypharm Pharmaceuticals, Inc., an Argentine subsidiary of Amgen, South San Francisco, CA, USA

OBJECTIVES: To map patient-reported EORTC QLQ-C30 scores from the ASPIRE trial to EQ-5D utility index scores after identifying mapping algorithms from published literature. ASPIRE is a randomized, open-label, phase 3 trial, which evaluated the treatment responses and AE of nantuzumab mAb with three time horizons (1, 5, and 10 years).

METHODS: We selected Medline, Embase, NHSEED, CENTRAL, DARE (January 2008 through September 2014) and conference proceedings (2010 to 2014) with the terms, EORTC, QLQ-C30, map, mapping, cross walk, translate, translation, algorithm, or mapping algorithm. Six articles reported mapping algorithms in a cancer population, relevant detailed information was available in four publications and extracted. Algorithms were implemented with ASPIRE data using regression modeling techniques including ordinary least squares (OLS) at domain and item levels, response mapping, and 2-part OLS model at item level where separate regres- sion models were applied for low and high average functional (KPS and NCF) domain scores. Utility scores at baseline in the ASPIRE trial population were estimated with UK tariffs from six algorithms. RESULTS: Mean utility at baseline varied by algorithm and ranged from 0.68 to 0.73 (Verset et al, 2013) to 0.83 to 0.84 (Proskorovsky et al, 2014, full OLS Model). The range of scores (i.e. min, max) produced from the algo- rithms varied considerably, as narrow as 0.06 to 1.05 (Proskorovsky, 2014 full OLS model), and as broad as 0.43 to 0.98 (Longworth 2014; OLS model).

CONCLUSIONS: The magnitude of average estimates to determine the best fitting model will involve congruence between modeled estimates and the range of utility values estimated for the UK general population (-0.594 to 1.00), utility scores reported elsewhere from similar subjects and clinical judgment with respect to patient characteristics in the ASPIRE trial.

PCN111

EVALUATION OF CONCORDANCE BETWEEN PATIENT REPORTED OUTCOMES (PROS) AND CLINICIAN REPORTED OUTCOMES (CROS) IN PATIENTS WITH METASTATIC BRAIN DISEASE

Tayakoo Ananthavilas B1, Lal L1, Swint J2

1Schulichkaj University, Bangkok, Thailand; 2Cardinal Health, Missouri, USA

OBJECTIVES: To assess the degree of agreement between PRO, time-tradeoff (TTO) utility and CROS in metastatic brain disease patients: neurocognitive function (NCF), Karnofsky performance status (KPS) and quality of life. METHODS: We retrospectively analyzed secondary data from 56 brain disease patients (57 randomized and 49 treated). A completed test battery with three time horizons (1, 5, and 10 years), NCF, KPS, quality of life (Functional Assessment of Cancer Therapy-Brain [FACT-BR]) and symptoms (MD Anderson Symptom Inventory-Brain Tumor [MDASI-BT]). Multiple linear regression analyses were used to explore the relationship between TTO utility values and the following variables: NCF, KPS, and FACT-BR scores. RESULTS: The utility scores associated with the FACT-BR (p-value<0.01 for 1-, 5- and 10-year TTO utility and 0.021 for 1-year TTO utility respectively) and the MDASI-BT (slope scores: p-value = 0.045 and 0.039 for 5- and 5-year TTO utility respectively). However the associations found were not strong. The NCF and KPS scores were not significantly associated with TTO utility. CONCLUSIONS: None of the functional scores used in metastatic brain disease explain patients’ decisions to trade time for better quality of life. Quality of life scores are significant predictors of TTO utility, but they have only a limited impact on patients’ decisions. Therefore it is essential to use PROs to incorporate patients’ perspectives of their symptoms and care and to complement the traditional CROS.

PCN112

USING FACT DATA TO PREDICT PREFERENCE-BASED UTILITY MEASURES FOR PEOPLE WITH MALIGNANT MELANOMA: A REVIEW OF THE EVIDENCE

Ara R1, Paisley S1, Robinson AA2, Azough A2, Mensah L3

1University of Sheffield, Sheffield, UK; 2University of Liverpool, Liverpool, UK

OBJECTIVES: To identify a published statistical relationship suitable for predicting UK specific preference-based utility scores (EQ-5D, SF6D or HUI) from FACT data (FACT-BRM, FACT-G or FACT-M) in individuals with malignant melanoma.

METHODS: A range of health and social science databases were searched using a keyword strategy with terms relating to the population (people with malignant melanoma) and both the relevant FACT instruments (FACT-BRM, FACT-G, FACT-M, FACT-L), feedback mechanisms (fact-based instruments; e.g. DCE, SF-6D, HUI2) in addition to the keyword searches, speculative searches using internet search engines and citation searching and reference list checking were undertaken with no restriction by date, language or study design. Any study which provided a statistical test of the relationship model described the relationship between one (or more) of the stated FACT and preference-based measures in patients with malignant melanoma were included in the review. Identified studies were appraised using a check list for the reporting standards of statistical regression models.

RESULTS: A total of 19 studies were identified from the literature searches, increasing to 27